

MIL-W-22759/20(AS)

28 January 1974

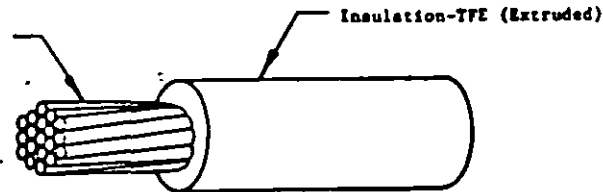
MILITARY SPECIFICATION SHEET

WIRE, ELECTRIC, FLUOROPOLYMER-INSULATED, EXTRUDED TFE,
SILVER-COATED HIGH STRENGTH COPPER ALLOY CONDUCTOR, 1000-VOLT

This specification is approved by the Naval Air Systems
Command, Department of the Navy.

The complete requirements for procuring the wire described herein shall
consist of this document and the issue in effect of Specification MIL-W-22759.

"Small Diameter"
Silver-Coated Stranded
High Strength Copper
Alloy Conductor



TFE-Polytetrafluoroethylene

TABLE I. CONSTRUCTION DETAILS

Part No. 1/	Wire size	Stranding (Number of strands X AWG gage of strands)	Diameter of stranded conductor (inches)		Finished wire		
					Resistance at 20°C (68°F) (ohms/1000 ft) (max)	Diameter (inches)	Weight (lbs/1000 ft) (max)
			(min)	(max)			
M22759/20-28-*	28	7 X 36	.014	0.015	74.4	.043 ±.002	1.91
M22759/20-26-*	26	19 X 38	.018	0.020	44.8	.048 ±.002	2.37
M22759/20-24-*	24	19 X 36	.023	0.024	28.4	.053 ±.002	3.35
M22759/20-22-*	22	15 X 34	.025	0.031	17.5	.060 ±.002	4.55
M22759/20-20-*	20	19 X 32	.037	0.039	10.7	.068 ±.002	6.41

1/ PART NO.: The asterisks in the part number column, Tables I and II, shall be replaced by color code designators in accordance with MIL-STD-681. Examples: Size 20, white - M22759/20-20-9; white with orange stripe - M22759/20-20-93.

TABLE 11. PERFORMANCE DETAILS

Part No.	Abrasion resistance (Procedure 11)				Bend testing			
	Resistance (inches of tape) (min) (initial condition)	Weight support bracket	Weight (lbs)	Tension load (lbs)	Mandrel diameter (inches) (+.32)		Test load (lbs) (+.32)	
					Life cycle (oven & bend tests) 1/	Cold bend test	Life cycle (oven & bend tests) 1/	Cold bend test
M22759/20-28--	24	A	.50	1.0	.125	.250	.50	
M22759/20-26--	24	A	.50	1.0	.125	.250	.50	
M22759/20-24--	30	A	.50	1.0	.125	.250	.50	
M22759/20-22--	30	A	.50	1.0	.250	.375	.75	
M22759/20-20--	30	A	.50	1.0	.250	.375	.75	

1/ Also for bend tests after immersion.

WIRE RATINGS AND ADDITIONAL REQUIREMENTS

TEMPERATURE RATING: 200°C (392°F) max conductor temperature

VOLTAGE RATING: 1000 volts (rms) at sea level

ABRASION RESISTANCE AFTER IMMERSION: No requirement

ACID RESISTANCE: Required

Dielectric test, 3000 volts (rms), 60Hz

BLOCKING: 260 ±2°C (500 ±3.6°F)

COLOR: In accordance with MIL-STD-104, Class 1; white preferred

COLOR STRIPING OR BANDING DURABILITY: 250 cycles (500 strokes) (min), 500 grams weight

DIELECTRIC TEST AFTER IMMERSION: 3000 volts (rms), 60Hz

FLAMMABILITY: Post-flame dielectric test not required

HUMIDITY RESISTANCE: No requirement

IDENTIFICATION DURABILITY: 125 cycles (250 strokes) (min), 500 grams weight

IMPULSE DIELECTRIC TEST: 9.5 kilovolts (peak), 1001 test

INSULATION RESISTANCE: 50,000 megohms for 1000 ft (min)

LIFE CYCLE: Oven temperature 275 ±2°C (527 ±3.6°F)

Dielectric test, 3000 volts (rms), 60Hz

LOW TEMPERATURE (COLD BEND):

Bend temperature: -65 ±2°C (-85 ±3.6°F)

Dielectric test, 3000 volts (rms), 60Hz

SHRINKAGE: 0.03 inch max at 290 ±2°C (554 ±3.6°F)

SMOKE: 290°C (554°F)

SPARK TEST OF PRIMARY INSULATION: Not required

SURFACE RESISTANCE: 500 megohm-inches (min) initial and final readings

THERMAL SHOCK: Oven temperature 200 ±2°C (392 ±3.6°F)

Max change in measurement, 0.060 inch

WICKING: No requirement

WIRE LENGTH REQUIREMENTS: Schedule A

WRAP TEST: "Wrap back" test required, no cracking

Oven temperature, 313 ±2°C (595.4 ±3.6°F)

Preparing activity:
Navy - AS
(Project No. 6145-W240)

INSTRUCTIONS: In a continuing effort to make our standardization documents better, the DoD provides this form for use in submitting comments and suggestions for improvements. All users of military standardization documents are invited to provide suggestions. This form may be detached, folded along the lines indicated, taped along the loose edge (*DO NOT STAPLE*), and mailed. In block 5, be as specific as possible about particular problem areas such as wording which required interpretation, was too rigid, restrictive, loose, ambiguous, or was incompatible, and give proposed wording changes which would alleviate the problems. Enter in block 6 any remarks not related to a specific paragraph of the document. If block 7 is filled out, an acknowledgement will be mailed to you within 30 days to let you know that your comments were received and are being considered.

NOTE: This form may not be used to request copies of documents, nor to request waivers, deviations, or clarification of specification requirements on current contracts. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or to amend contractual requirements.

(Fold along this line)

(Fold along this line)

DEPARTMENT OF THE ARMY



NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

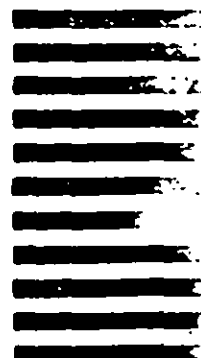
OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE \$300

BUSINESS REPLY MAIL

FIRST CLASS PERMIT NO. 12062 WASHINGTON D. C.

POSTAGE WILL BE PAID BY THE DEPARTMENT OF THE ARMY

DIRECTOR
THE INSTITUTE OF HERALDRY
US ARMY
AKKN DAAG-HDT
CAMERON STATION
ALEXANDRIA, VA 22314



STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

(See Instructions - Reverse Side)

1. DOCUMENT NUMBER		2. DOCUMENT TITLE	
3a. NAME OF SUBMITTING ORGANIZATION		4. TYPE OF ORGANIZATION (Mark one) <input type="checkbox"/> VENDOR <input type="checkbox"/> USER <input type="checkbox"/> MANUFACTURER <input type="checkbox"/> OTHER (Specify): _____	
3b. ADDRESS (Street, City, State, ZIP Code)			
5. PROBLEM AREAS			
a. Paragraph Number and Wording:			
b. Recommended Wording:			
c. Reason/Rationale for Recommendation:			
6. REMARKS			
7a. NAME OF SUBMITTER (Last, First, MI) - Optional		5. WORK TELEPHONE NUMBER (Include Area Code) - Optional	
8. MAILING ADDRESS (Street, City, State, ZIP Code) - Optional		9. DATE OF SUBMISSION (YYMMDD)	

(TO DETACH THIS FORM, CUT ALONG THIS LINE.)